



REMARKS

We are in receipt of the Office Action dated February 13, 2003, and the above Amendment and following remarks are made in light thereof.

Initially, the Examiner has objected to the disclosure because of the reference to "Group 15" and "Group 13," rather than "Group V" and "Group III" (or "Group 5" and "Group 3"). Applicant respectfully submits that the identification of Groups 13 and 15 in the specification is consistent with the new international notation. Attached is a copy of the periodic table as it appears in Webster's New World Dictionary, Third College Edition, confirming this practice. Consequently, Applicant submits that amendment of the specification as required by the Examiner should not be required.

Applicant also notes the objection to the claims in which claims 27-68 have been renumbered as claims 18-59. The present Amendment is made in accordance with the new numbering of the claims.

The Examiner has rejected claims 22 and 28 for lacking an antecedent basis for "said third insulating film" that appears in the last line of each claim. Claims 22 and 28 have been amended in the last line to call for "said first insulating film."

Pursuant to the Office Action, claim 22 is rejected for obviousness over Moon 5,942,310 in view of Sato 5,818,552. Claim 23 is rejected for being obvious over Moon in view of Sato and Ishizu et al. 4,984,033. Claim 28 is rejected for being obvious over Moon in view of Sato and Misawa 5,341,012. Claim 29 is rejected for being obvious over Moon in view of Sato and Ishizu et al. and Misawa.

In the foregoing Amendment, independent claims 22, 23, 28 and 29 have been amended to recite more specifically the location of the light shielding conduct film. Applicant asserts that

structure is not achieved by the combination of Moon and Sato, or any of the secondary references relied upon by the Examiner.

The Applicant appreciates the thoroughness with which the Examiner has reviewed the claims of the present application. However, in view of the cancellation of all but four of the independent claims, Applicant believes that the other rejections are rendered moot.

Accordingly, Applicant believes that the application is now in condition for allowance, and an early Office Action in this regard is earnestly requested.

Respectfully submitted,

A handwritten signature in cursive script, reading "Stephen B. Heller", is written over a horizontal line.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 18-21, 24-27, 30-33, 36-39 and 54-57 have been cancelled.

Claims 22, 23, 28, and 29 have been amended to read as follows:

22. (Currently Amended) A semiconductor device comprising:

a substrate;

a light shielding conductive layer formed over said substrate;

at least one pixel electrode formed over said substrate;

at least one thin film transistor formed over said substrate for switching said pixel electrode, said thin film transistor comprising:

a semiconductor layer having at least source, drain and channel regions and a capacitor forming portion, wherein said light shielding film is located below said semiconductor layer ~~at least said channel region is overlapped with said light shielding conductive layer;~~

a first insulating film formed on said channel region; and

a gate electrode formed over said channel region with said first insulating film interposed ~~therebetween~~ therebetween,

a storage capacitor electrically connected to said thin film transistor, said storage capacitor comprising:

said capacitor forming portion of the semiconductor layer;

a capacitor forming electrode formed over said capacitor forming portion; and

a second insulating film interposed between said capacitor forming portion and said capacitor forming electrode,

wherein said second insulating film is thicker than said ~~third~~ first insulating film.

23. (Currently Amended) A semiconductor device comprising:

a substrate;

a light shielding conductive layer formed over said substrate;

a first insulating film formed on said light shielding conductive layer;

a semiconductor layer formed on said first insulating film, said semiconductor layer having at least a pair of impurity regions and a channel region extending therebetween and a capacitor forming portion, wherein ~~at least said channel region is overlapped with said light shielding conductive layer~~ said light shielding conductive layer is located below said semiconductor layer;

a second insulating film formed on said channel region;

a third insulating film formed on said capacitor forming portion of the semiconductor layer;

a gate electrode formed over said channel region with said second insulating film interposed therebetween;

a capacitor forming electrode formed over said capacitor forming portion of the semiconductor layer with said third insulating film to form a storage capacitor, wherein said second insulating film is thicker than said third insulating film;

a fourth insulating film formed over said storage capacitor and said gate electrode;

an electrode formed on said fourth insulating film;

a fifth insulating film formed over said fourth insulating film and said electrode;

a black mask formed on said fifth insulating film;

a sixth insulating film formed over said fifth insulating film and said black mask; and

a pixel electrode formed on said sixth insulating film and electrically connected to one of said pair of impurity regions.

28. (Currently Amended) A projector comprising:

a light source; and

a liquid crystal panel for modulating light from said light source, said liquid crystal panel comprising:

a substrate;

a light shielding conductive layer formed over said substrate;

at least one pixel electrode formed over said substrate;

at least one thin film transistor formed over said substrate for switching said pixel electrode, said thin film transistor comprising:

a semiconductor layer having at least source, drain and channel regions and a capacitor forming portion, wherein ~~at least said channel region is overlapped with said light shielding conductive layer~~ said light shielding conductive layer is located below said semiconductor layer;

a first insulating film formed on said channel region; and

a gate electrode formed over said channel region with said first insulating film interposed ~~therebetween~~ therebetween,

a storage capacitor electrically connected to said thin film transistor, said storage capacitor comprising:

said capacitor forming portion of the semiconductor layer;

a capacitor forming electrode formed over said capacitor forming portion; and

a second insulating film interposed between said capacitor forming portion and said capacitor forming electrode,

wherein said second insulating film is thicker than said ~~third~~ first insulating film.

29. (Currently Amended) A projector comprising:

a light source; and

a liquid crystal panel for modulating light from said light source, said liquid crystal panel comprising:

a substrate;

a light shielding conductive layer formed over said substrate;

a first insulating film formed on said light shielding conductive layer;

a semiconductor layer formed on said first insulating film, said semiconductor layer having at least a pair of impurity regions and a channel region extending therebetween and a capacitor forming portion, wherein ~~at least said channel region is overlapped with said light shielding conductive layer~~ said light shielding conductive layer is located below said semiconductor layer;

a second insulating film formed on said channel region;

a third insulating film formed on said capacitor forming portion of the semiconductor layer;

a gate electrode formed over said channel region with said second insulating film interposed therebetween;

a capacitor forming electrode formed over said capacitor forming portion of the semiconductor layer with said third insulating film to form a storage capacitor, wherein said second insulating film is thicker than said third insulating film;

a fourth insulating film formed over said storage capacitor and said gate electrode;

an electrode formed on said fourth insulating film;

a fifth insulating film formed over said fourth insulating film and said electrode;

a black mask formed on said fifth insulating film;

a sixth insulating film formed over said fifth insulating film and said black mask; and



a pixel electrode formed on said sixth insulating film and electrically connected to one of said pair of impurity regions.